
From The SHORELINE

WINTER 2000 www.biology.ualberta.ca/alms/home.htm

ALBERTA LAKE MANAGEMENT SOCIETY

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PRESIDENT'S MESSAGE



This will be my last message to our readers as President. My term will end at the next AGM in March. Taking on a leadership role such as this seemed a little daunting at first, considering the shoes one had to fill and the good work and leadership of those who preceded you. However, it has been a very rewarding experience and I encourage everyone to do the same and get involved.

1999/2000 has been a formative year in the life of the new *Water Act*. Now one year in existence, this new law is just beginning to exert its influence on Albertans who live next to water bodies.

Approvals are still required for

modifying shorelines and creating developments that encroach into a lake. A number of activities are exempted from requiring approvals including the placement of a temporary pier onto the bed of a lake.

The tolerance level for unauthorized shoreline developments is decreasing as fisheries and fish habitat declines become increasingly pronounced. In the new Act, enforcement powers have been strengthened and Conservation Officers throughout Alberta now have better tools for enforcing shoreline offences. Administrative fines can also now be levied under the Act for offences.

On a more positive note, the Act has provisions for Water Management Planning initiatives. For those with an interest in lake and watershed management, opportunities will exist to provide public input into the development of such plans.

On the federal side of things, the federal Government in Ottawa began the "Great Canadian Water Debate" turning the concept of bulk water exports into a national issue. The feds are fearful of seeing continental fresh water resources become a tradable commodity and thus exportable under NAFTA. They announced a strategy to prohibit the bulk removal of water — including water for export — from Canadian watersheds. The new strategy includes:

- C Amendments to the International Boundary Waters Treaty Act (IBWTA) to give the federal government regulatory power to prohibit bulk removals from

boundary waters, principally the Great Lakes.

- C A proposal to develop, in co-operation with the provinces and territories, a Canada-wide accord on bulk water removals to protect Canadian watersheds. The ministers called on those provinces and territories that have not already done so to adopt moratoriums on bulk water removal while the accord is being developed.

The Alberta Government's response was typical in suggesting there was no need for them to sign such a strategy because the Province already had sufficient legislation in place through its *Water Act* to prevent licenses being issued to transfer water outside of Canada. It should be noted however, that such transfers could potentially be allowed by a special Act of the Legislature after a public consultation process. One's view on how likely this may occur depends on how much faith one has in the arena of politics!

There have also been rumours that 40+ federal fisheries employees will be moving into Alberta with the responsibility for assessing fish habitat impacts (Harmful Alteration, Disruption and Destruction, aka HADD) pursuant to the federal *Fisheries Act*. It is unknown how this will affect regulatory approval mechanisms for shoreline alterations and developments.

On a more personal note, for me it was also a year of many mile-stones. I got married and am in the process of buying my first house. I also travelled for an extended time in SE Asia, getting

a very different view of riverine and riparian areas in the states of Sarawak and Sabah on the island of Borneo, Malaysia. As the role of leadership is passed on, I look forward to new opportunities and will continue working with ALMS and its members in a new capacity.

Finally, I would like to announce that ALMS will be holding this year's Fall Workshop at Gull Lake on September 22 - 23, 2000. I hope to see you all there.

Gerry Haekel

ALMS ANNUAL GENERAL

From
The **SHORELINE**

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From The Shoreline is the official newsletter of the Alberta Lake Management Society (ALMS), providing a forum for the communication and exchange of information and experiences relating to the management of lakes and their watersheds.

Editor: Gerry Haekel

From The Shoreline tries to be published four times each year in Winter (January), Spring (April), Summer (July), and Fall (October).

Articles submitted for publication must be received no later than **one month prior the month of publication.**

Please address all articles and letters to:

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The opinions and advice expressed in the newsletter are those of the contributors and do not necessarily imply endorsement by the Society.

MEETING

ALMS will be holding the 2000 Annual General Meeting on March 24, 2000 in Edmonton. Once again, the AGM will feature a speaker and light refreshments.

The evening will begin with a speaker on a lake management related topic. After a short break Gerry Haekel, our outgoing President, will present a brief summary of the year in review. This will then be followed by the election for new board members.

We invite all interested and motivated individuals to seek a position on the board (see description of Director roles). There is so much we can do as an organization, but we need your enthusiasm and help to do it.

Please join us in Edmonton at 7:00 PM at the Riverbend Community Centre located at 258 Rhatigan Rd. East. See the insert for directions and a map.

NEW BOARD MEMBERS BEING SOUGHT FOR ELECTION

At the AGM, one half of ALMS' Board of Directors (8) will have their terms end. This presents an opportunity for other individuals who are ALMS members to become a director. In addition, the following executive positions will require filling including President, Vice-President, and Treasurer.

Briefly, the following descriptions summarize the main executive position requirements, functions, and responsibilities:

President - good leadership, communication and facilitation skills; must have a vision for ALMS and the direction in which s/he wants the Society to move towards; support the needs of the membership; responsible for liaising with local communities, other associations, and local and provincial government agencies; establish and implement the Society's

annual goals, programs, projects and other activities in consultation with the Board of Directors; and represent ALMS at forums involving stakeholder consultation or lake, river and watershed related functions.

Vice-President - good leadership, communication and facilitation skills; assist in planning and coordination of the Society's functions; support other director's and portfolio holders; carry on the President's role when necessary; often steps up into the position of President at terms end.

Treasurer - responsible for maintaining the Society's financial records including monthly cash flow; prepare a financial update for each Director's meeting; prepare and present a year-end report for the AGM.

Secretary - responsible for maintaining membership lists, incoming and outgoing mail, and recording all Board meeting minutes.

ALMS also has a number of portfolio positions requiring volunteers. These are available to anyone interested in the organization.

UPDATES FROM AROUND ALBERTA

Interpretive wetland to educate thousands on Bow River habitat

Calgary – December 6, 1999. Alberta Environment, BP Amoco and The City of Calgary are forming a partnership to develop the first phase of a new 36-acre (14.6 hectares) interpretive wetland adjacent to the Sam Livingston Fish Hatchery on the Bow River.

The \$916,500 project, to be called the Pearce Estate Park Interpretive Wetland, will showcase aquatic habitats common to southern Alberta, including a variety of fish, plant, animal and bird species. The wetland will serve as a valuable educational tool for school children, conservation groups and park visitors. About \$216,500 of the total project funding

is in place with fundraising efforts ongoing for the remainder.

"This is a wonderful example of business and government working in partnership to create a lasting and meaningful environmental legacy for Albertans," said Environment Minister Gary Mar. "We welcome this opportunity to create valuable fish and wildlife habitat."

The concept includes a series of winding creeks, ponds and bogs to trace the path of a typical foothills stream from source to outlet. Grassy meadows and patches of forest will complement the wetland to create a range of representative southern Alberta habitats. Up to 25,000 people are expected to visit the site in the first year of operation. Visitors will be able to stroll along paths and boardwalks, stopping at picnic areas and viewpoints to take in a variety of plant and animal species. The result is a unique educational and interpretive park that adds yet another dimension to Calgary's sprawling Bow River valley.

"It's a living, breathing outdoor classroom," said BP Amoco president Joe Bryant. "Our company believes in a clean and sustainable environment and investment for the future. This wetlands project is a wonderful example of both."

Bryant proudly announced that BP Amoco volunteers will kick-off the wetland construction next summer when Calgary hosts the BP Amoco Classic – the largest intra-company athletic event in the world. To be held at various venues in the city from July 19-23, 2000, the Classic is expected to attract up to 3,000 BP Amoco employees and their families to Calgary.

"This is exciting news for Calgary and its citizens," said Calgary Mayor Al Duerr. "As host of the BP Amoco Classic, our city, our environment and our citizens will benefit tremendously. This partnership, and the volunteer spirit of BP Amoco employees, means

an important component of Calgary's plans for the river valley park system will come to life sooner than anticipated."

Added Duerr: "The Wetland project is a milestone in the implementation of the city's Urban Parks Master Plan, a framework for protecting, managing and appropriately developing a comprehensive river valley park system."

LAKWATCH

Alberta's volunteer lake monitoring program known as Lakewatch has been an important source of water quality data for Alberta Environment and lake associations. In 1999, volunteers from lake associations, the Alberta Lake Management Society (ALMS) and Alberta Environment employees collected water samples bi-weekly from Burnstick Lake, Chestermere Lake, Dried Meat Lake, Gull Lake and Hastings Lake. A report outlining the Lakewatch program and results from the 1999 water quality survey for the five lakes is currently being compiled.

Why have a volunteer lake monitoring program?

Volunteer lake monitoring programs are intended to accomplish four primary objectives for lake management:

- (i) They act as a platform for educating lake users about the aquatic environment;
- (ii) they foster and enhance public involvement in lake management;
- (iii) they facilitate a link between aquatic scientists and lake users; and
- (iv) they can provide reliable water quality data, that, in the present era of funding constraints can result in cost-saving to government programs.

Volunteer monitoring programs have been implemented in several provinces

in Canada and states in the U.S., where one or two of the above objectives have been emphasized, but usually all four are achieved in part. In Alberta, Lakewatch has operated for eight years and collected data from 22 lakes.

Volunteer programs elsewhere have become so successful that they have expanded into a major source for water quality data. For example, in the United States, the Missouri Volunteer Monitoring Program involves 33 volunteers monitoring 15 lakes annually. The resulting volunteer data set was independently tested using professionally collected data and was considered highly accurate for its summer mean representation of individual lakes. The utility of volunteer programs in collecting reliable and inexpensive water quality data has been recognized by the EPA to the point that they maintain a web site with access to manuals, data reporting, and data access at <http://www.epa.gov/OWOW/monitoring/>

How does Lakewatch help Albertans?

Much concern has been raised over the pollution of Alberta lakes. It is a common belief that human activities, including industry, urbanization, forestry, agriculture, and residential dwellings contribute pollutants to lakes causing excessive algal growth, weeds and murky water. Lakewatch allows people to be involved in determining lake water quality so that they can make informed decisions at council meetings regarding developments that may impact their lakes.

Sampling for what?

Water samples are collected in Lakewatch to determine basic chemical characteristics that characterize general water quality. Though not all encompassing, the parameters collected in Lakewatch are sensitive to human activities in watersheds that can cause degraded water quality. For example, nutrients such as phosphorus and nitrogen are important determinants of

a lakes potential productivity. The concentrations of these nutrients in a lake are impacted (typically elevated) by land use changes such as increased agricultural activity or livestock grazing. In addition to possible increases in undesirable algae resulting in low dissolved oxygen concentrations, degraded habitat for fish and noxious smells, a large increase in nutrients over time warns of other human health issues such as increases in the bacteria *Cryptosporidium* depending on the nutrient source.

Do you want to get involved?

The success of Lakewatch depends on interest and involvement from its volunteers. If you are concerned about water quality issues in Alberta and would like to help monitor our water quality then please contact:

Preston McEachern
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University of Alberta
Edmonton, AB. T6G 2E9
Tel: (780) 492-6304
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BIOLOGY

The Shoreline Interface



Shorelines are the interface between two diverse environments: one aquatic and the other terrestrial. This is where water interacts with land and where upland land uses have the most impact on the aquatic environment.

The shoreline is sometimes referred to the high water mark or the bank. This line separates private land from the bed of the lake, which is Crown land.

This boundary is technically known as the legal bank and is formed by the interaction of the water at its normal level (i.e. not during a drought or a flood). Sometimes the location of this line is obvious and at other times it is not. There are however indicators that can be used to approximate where the line occurs, such as where aquatic plant growth ends (e.g. bull rush, cattails, and sedges), or where soil particle sizes change in response to long-term wave action. Subdivision plans are also useful tools in locating a lake bank since they often show a surveyed bank.

The shoreline interface is also where water does its work, sculpting the landscape by removing, adding and transporting material (soil). Water has energy. This energy is used to move soil material from one place to another. The constant ebb and flow of water of surface water seeks to maintain a balance between the removal of sediment (erosion) and its deposition elsewhere. In an unaltered system with a natural shoreline, this tug-of-war is in a state of equilibrium, and thus relatively stable. Emergent aquatic vegetation assists in keeping the system stable and works to slow or dampen erosive wave action. On the other end of the equation natural beaches form when littoral drift deposits sediment into areas where the shore is protected or where prevailing winds most commonly blow to.

When shorelines are altered by the removal of riparian vegetation and natural rock armouring, or by slope modification, the natural equilibrium is altered. Bank erosion is accelerated often requiring expensive erosion protection. Siltation is common and can have an effect on water quality and aquatic habitat.

Work to modify the profile of a shoreline or to place a permanent development on the bed of a lake requires prior approval from a variety of regulatory agencies. This includes approvals from the provincial government (Public Lands Division and Water Management, Natural resource Service); a development permit is likely

needed from the local municipality to ensure the works are permissible, do not encroach and if a reserve is involved; and possibly from the federal government (Department of Fisheries and Oceans: Fisheries, and Coast Guard).

NEXT NEWSLETTER DEADLINE

Articles to the editor, etc. must be received by **May 19, 2000** to be considered for the Spring/Summer newsletter.

We welcome your letters, newsletter articles, event notices, and suggestions for improving the newsletter.

Let us know what's happening in your lake neighbourhood this year! **É**

Editor
